

# Lake Restoration in Iowa

## An On-going Success Story



# History of Program



- Prioritization of significant public lakes
- Factors: water quality, public benefit, feasibility of restoration
- Criteria, guidelines and goals
- Legislatively adopted plan



# Significant, Publicly-owned lakes

- Maintained principally for public use
- Capable of supporting multiple benefits
- Surface water area of at least 10 acres
- Watershed to lake surface area ratio of less than 200:1

Not federal flood control impoundments or lakes used solely as water supply reservoirs



A silhouette of a person fishing on a lake at sunset. The person is holding a fishing rod and a small fish. The sun is low on the horizon, creating a bright reflection on the water. The background shows a dark shoreline with trees.

- Six of ten Iowans visit our lakes multiple times each year

- Most popular activities at Iowa lakes are fishing, picnicking, nature appreciation, boating, and swimming

- Iowa's lakes generate \$1.6 billion in annual in-state spending



# Value of Lakes to Iowa



- (2009) Number of household trips up 27%
- Water quality improvement efforts = increased usage
- In 2009 recreational spending increased by \$397 million dollars

# Process and Criteria

- Lake and watershed assessment and restoration plan
- Watershed controls in place before lake restoration begins
- Proposed dredging evaluated with biologic and structural controls to achieve water quality targets



# Program Goals

- Cost effective, positive return for Iowa
- Local commitment to lake / watershed protection
- Significant improvement to water clarity, safety and quality of Iowa lakes





# Lake Restoration Targets

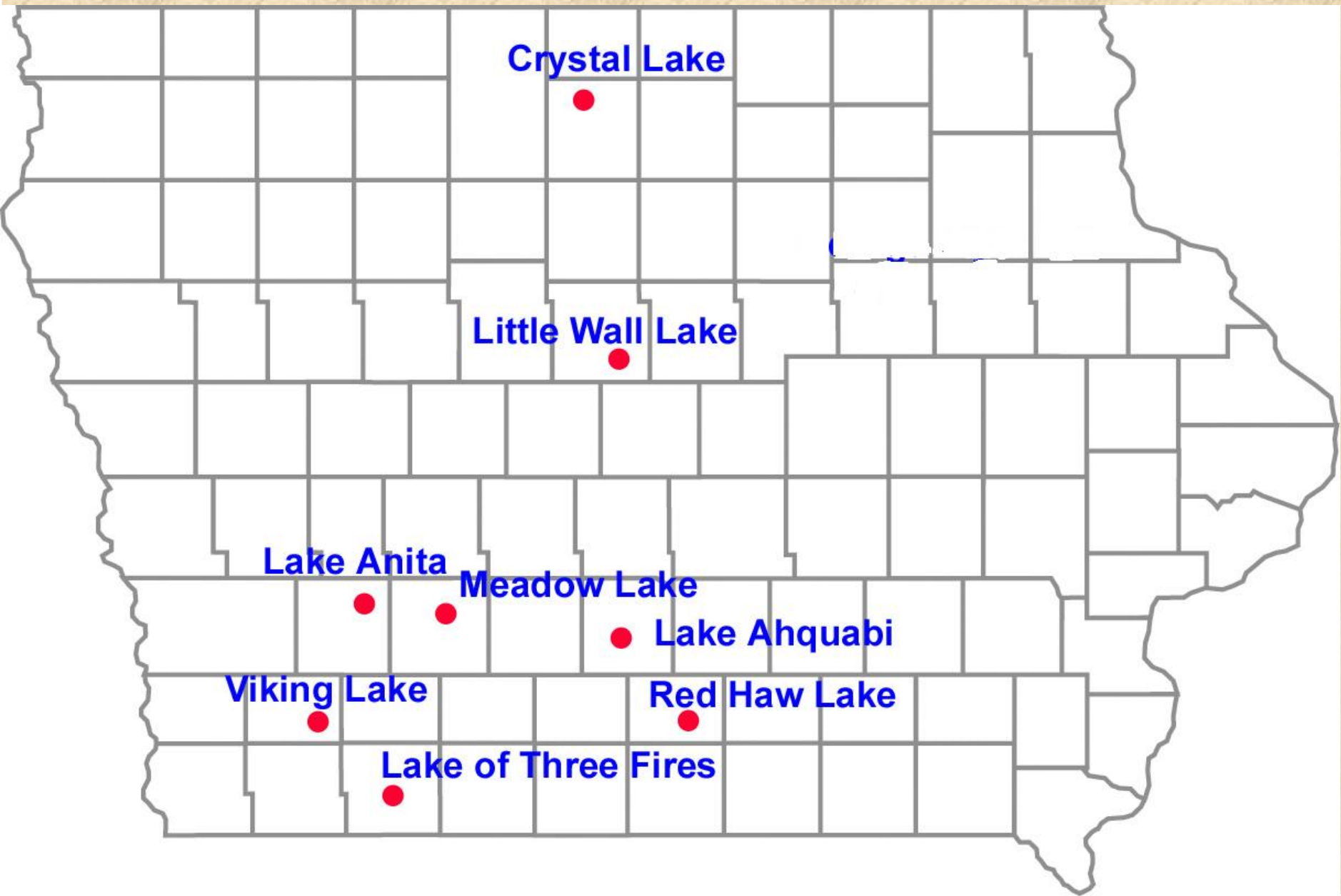
- **Water Clarity**
  - 4.5 ft. achieved 50% of time  
April-September
- **Beaches meet recreational use standards**
- **Sustainable, healthy lake system**
- **Remove lake from impaired waters list**



# Lake Restoration Program



# Projects completed / maintenance





# Lake Restoration Program Status

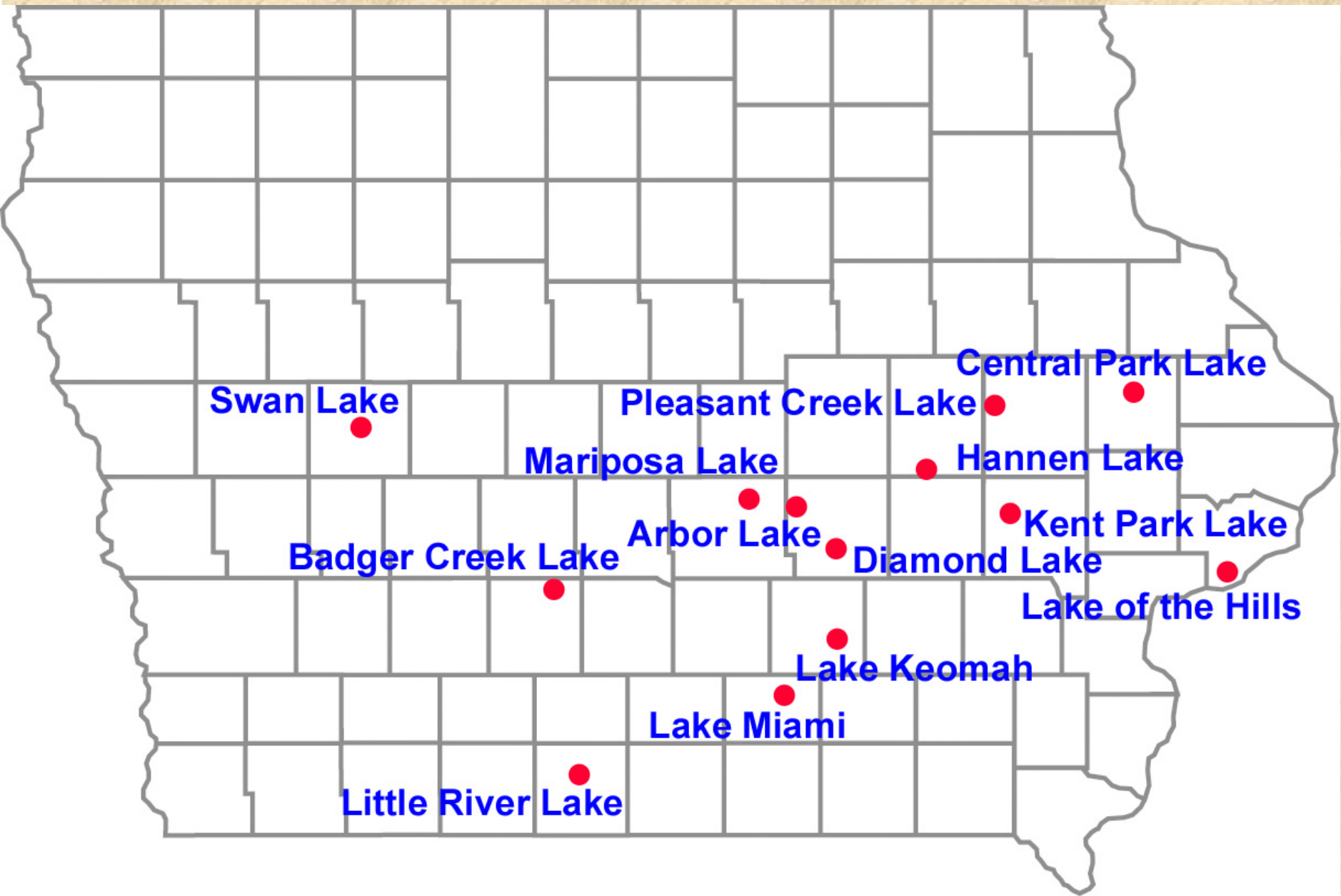
- 8 projects completed, maintenance

- 26 projects underway

- 13 projects (planning, initial outreach)

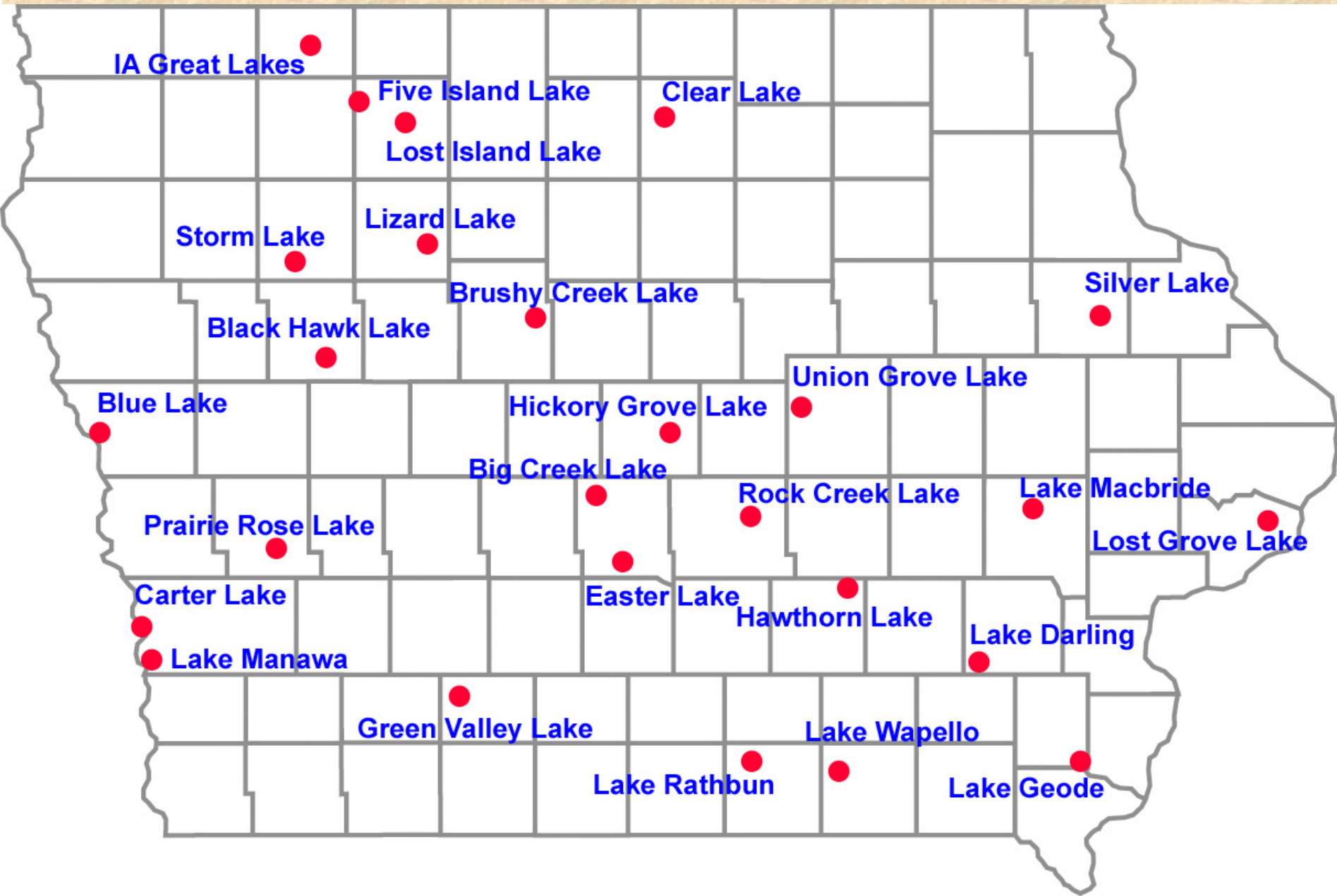


# Planning /watershed assessment stage





# Projects in progress



# Easter Lake (Polk Co.)



1969



1995



2021?

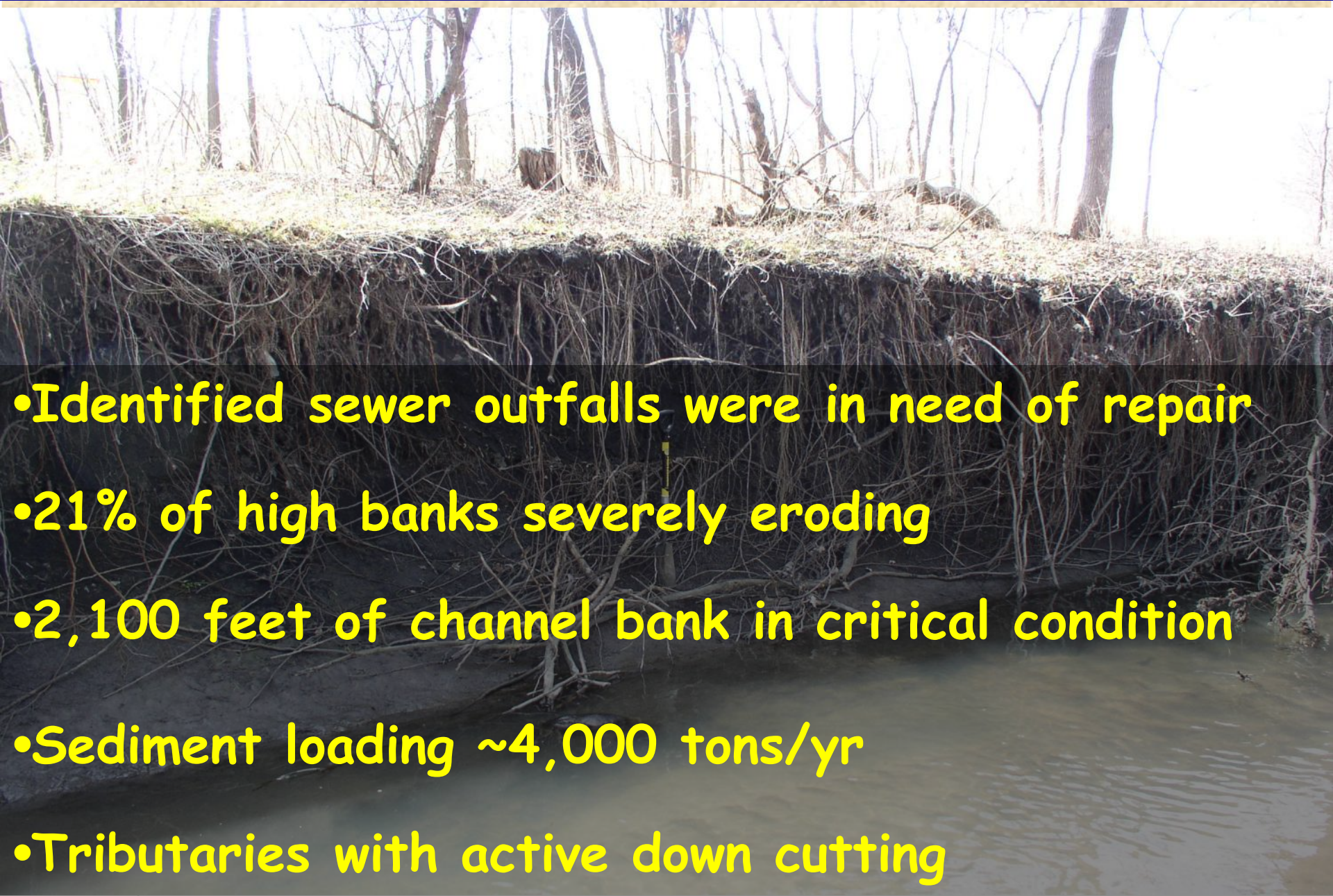


Effects of Siltation  
on Easter Lake





# NRCS Assessment of Yeader Creek

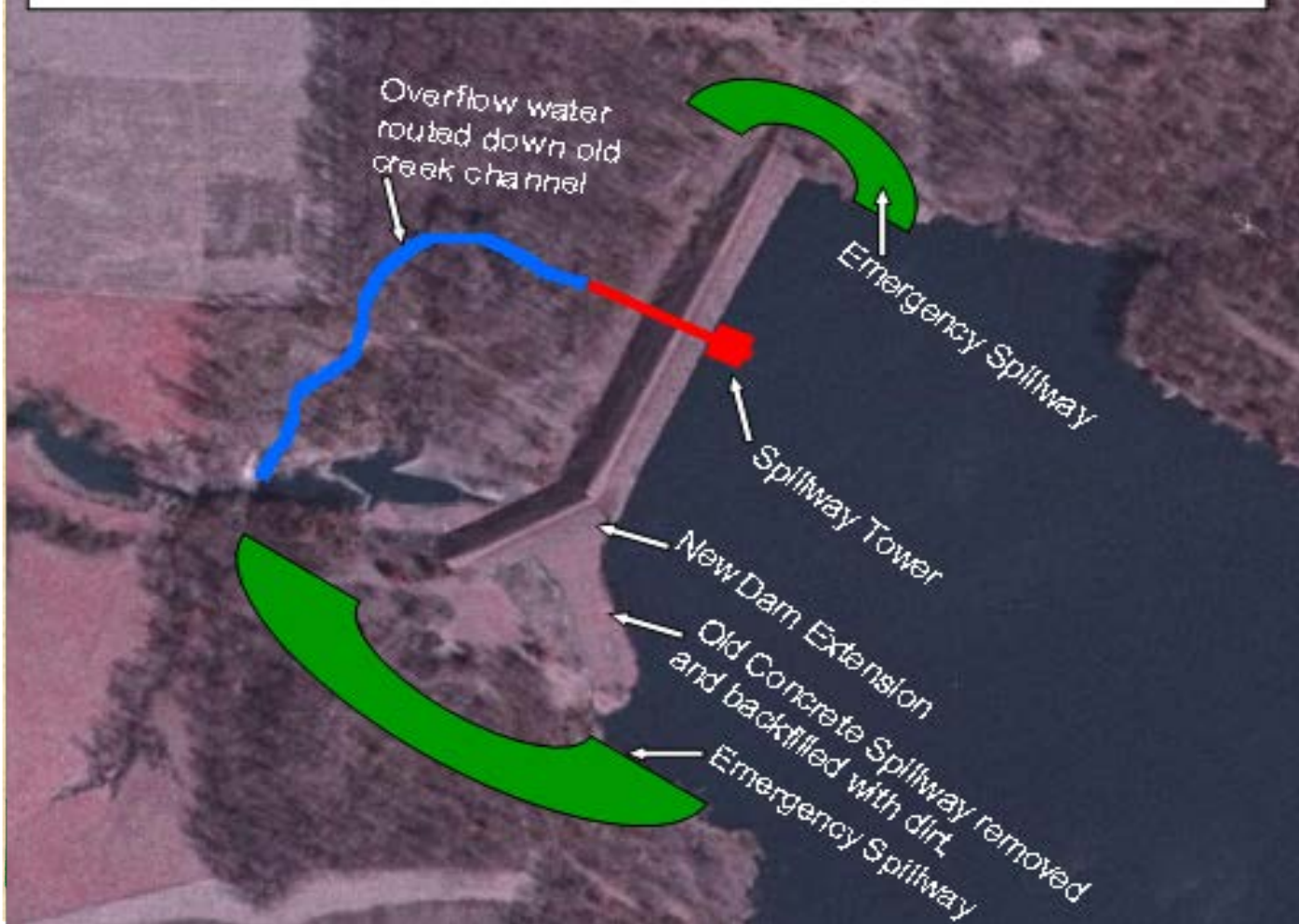


- Identified sewer outfalls were in need of repair
- 21% of high banks severely eroding
- 2,100 feet of channel bank in critical condition
- Sediment loading ~4,000 tons/yr
- Tributaries with active down cutting



# Lake Darling (Washington Co.)

A drawing of the new spillway and dam





# Proposed FY12 Budget

Project Name	Description	Budget	Federal	Other
Storm Lake	Dredging / Little Storm Lake	\$1,200,000		\$100,000
Clear Lake	SEC 206 Ventura Marsh	\$100,000	\$190,000	
Carter Lake	Implementation of Restoration Plan	\$900,000	\$540,000	\$1,235,000
Project Mgmt.	Engineering / Administration	\$500,000		
Five Island Lake	Dredging	\$200,000		\$200,000
Lake Darling	Dam Construction / In-lake Restoration	\$100,000		
Lost Island Lake	Fish Barrier / Water Control Structures	\$150,000		
Lake Manawa	Dredging / Watershed	\$1,825,000		\$1,825,000
Prairie Rose Lake	Sediment Removal / In-lake Restoration	\$1,500,000		
Black Hawk Lake	Watershed Improvement	\$100,000		\$100,000
Easter Lake	Water Quality Improvement Plan	\$25,000		
Little River Lake	In-lake Restoration / Shoreline	\$1,500,000		\$425,000
IA Great Lakes	Watershed Protection	\$100,000		\$250,000
Minor Projects	Restoration Action Plans / Projects	\$350,000		
Shallow Lakes	Water Quality Improvements	\$50,000		\$50,000
Total		\$8,600,000	\$730,000	\$4,185,000

**For more information...**

**[www.iowadnr.gov/water/lakerestoration/](http://www.iowadnr.gov/water/lakerestoration/)**

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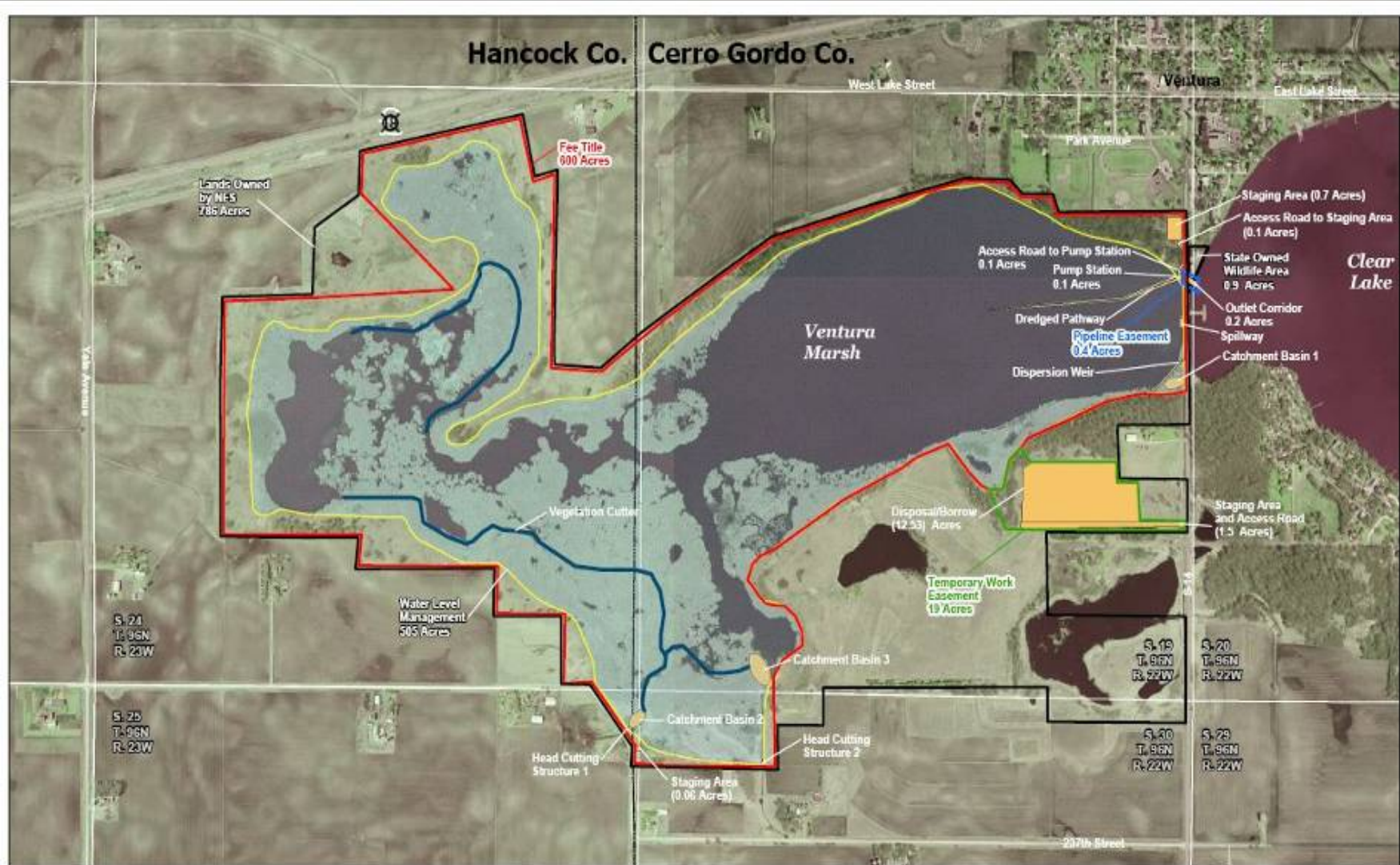


# Carter Lake (Pottawattamie Co.)





# Clear Lake (Cerro Gordo Co.)



## KEY TO FEATURES

- |                     |                        |
|---------------------|------------------------|
| Lands Owned by NIFS | County Line            |
| Project Features    | Section Lines          |
| Vegetation Cutter   | Water Level Management |



## Ventura Marsh, IA Section 206

0 500 1,000 2,000 3,000 4,000 5,000 Feet

Map produced 17 April 2007.



US Army Corps  
of Engineers®  
Rock Island District



# Green Valley Lake (Union Co.)

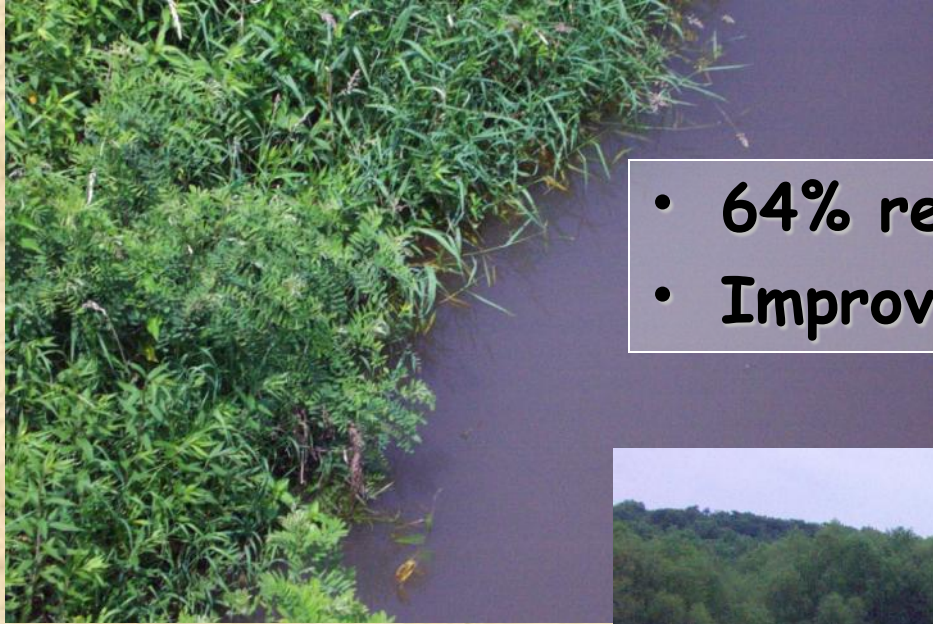




# Proposed FY11 Budget

Project Name	Description	Budget	Federal	Other
Storm Lake	Dredging / Little Storm Lake	\$1,200,000		\$156,020
Clear Lake	SEC 206 Ventura Marsh / Dredging	\$340,112	\$832,476	\$10,000
Carter Lake	Implementation of Restoration Plan	\$355,717	\$961,116	\$2,195,736
Project Mgmt.	Engineering / Administration	\$184,703		
Five Island Lake	Dredging	\$200,000		\$200,000
Green Valley Lake	Sediment Removal	\$672,000		
Hawthorn Lake	In-lake Restoration / Shoreline	\$300,000		\$246,907
Lake Darling	Dam Construction / In-lake Restoration	\$1,737,362	\$112,505	
Lost Island Lake	Fish Barrier / Water Control Structures	\$650,000		\$180,000
Lost Grove Lake	Dam Construction	\$2,000,000		\$2,218,641
Lake Manawa	Dredging / Watershed	\$1,000,000		
Prairie Rose Lake	Containment Site	\$340,570	\$80,000	\$10,000
Easter Lake	Water Quality Improvement Plan	\$50,000		
IA Great Lakes	Watershed Protection	\$250,000		\$228,000
Minor Projects	Restoration Action Plans / Projects	\$350,020		
Shallow Lakes	Water Quality Improvements	\$19,516		
Delhi/Twin Ponds	Special Projects	\$350,000		
<b>Total</b>		<b>\$10,000,000</b>	<b>\$1,986,097</b>	<b>\$5,445,304</b>

# Lake Icaria (Adams County)

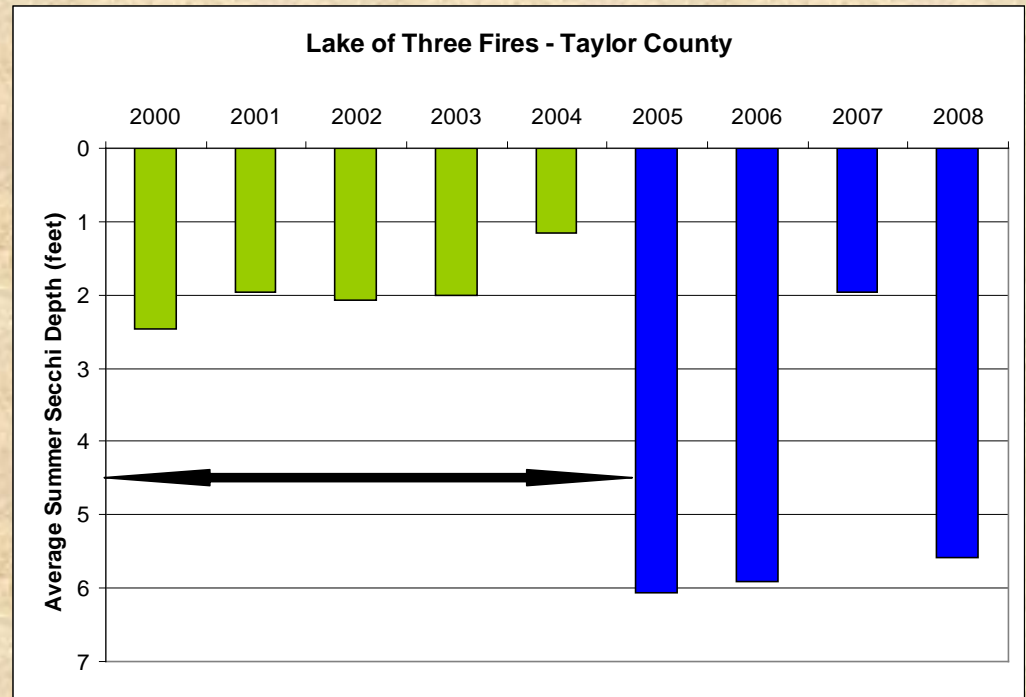


- 64% reduction in sediment delivery
- Improved water quality





# Lake of Three Fires (Taylor County)



- Substantial watershed and in-lake improvements
- Eliminated problem fish
- Water quality goals met

Before



After





# Lake of Three Fires

- Outstanding developing fishery



# Nine Eagles Lake (Decatur County)

